

Appl. No. 10/728,626
Response dated November 19, 2004
Reply to Office Action of September 24, 2004

Amended Claims:

1. (Currently Amended) A method of fueling a gas turbine with methane gas from natural gas reserves having from about 40 to about 80 volume percent methane, the method comprising:
providing a first natural gas stream from the natural gas reserve;
separating inert gases from methane gas in the first natural gas stream to provide a separated methane gas and a separated inert gas;
blending the separated inert gas with a second natural gas stream having from about 40 to about 80 volume percent methane to form an inert gas/methane gas blend, wherein after blending the amount of inert gas in the second natural gas stream will decrease the relative percentage of methane gas in the inert gas/methane gas blend to below about 40 volume percent methane, based upon the volumes of inert and methane gases; and
fueling a gas turbine with the inert gas/methane gas blend.

2-6 (Cancelled)

7. (Currently Amended) ~~A~~ The method of fueling a gas turbine ~~with methane gas from natural gas reserves having from about 40 to about 80 volume percent methane, the method comprising;~~
~~providing a first natural gas stream from the natural gas reserve;~~
~~separating inert gases from methane gas in the first natural gas stream to provide a separated methane gas and a separated inert gas;~~
~~blending the separated inert gas, hydrogen, and a second natural gas stream having from about 40 to about 80 volume percent methane~~ as recited in claim 1 and further comprising adding hydrogen to the the inert gas/methane gas blend to provide a hydrogen enhanced inert gas/methane gas/hydrogen gas blend ~~wherein the amount of inert gas blended with the second natural gas stream will decrease the relative percentage of methane gas to below about 40 volume percent methane, based upon the volumes of inert and methane gases, the hydrogen gas being in an amount effective for providing flame stability for the hydrogen enhanced inert gas/methane gas/hydrogen gas blend; and~~

Page 2 of 6

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Appl. No. 10/728,626

Response dated November 19, 2004

Reply to Office Action of September 24, 2004

fueling a gas turbine with the hydrogen enhanced inert gas/methane gas/hydrogen gas blend.

8. (Original) The method for fueling a gas turbine as recited in claim 7 wherein the hydrogen enhanced inert gas/methane gas/hydrogen gas blend comprises at least about 6 volume percent hydrogen gas.

9. (Original) The method for fueling a gas turbine as recited in claim 7 wherein the method further includes dehydrating the natural gas or hydrogen enhanced inert gas/methane gas/hydrogen gas blend, the dehydration effective for providing the hydrogen enhanced inert gas/methane gas/hydrogen gas blend with at least about 110 BTUs per standard cubic foot of gas.

10. (Currently Amended) The method for fueling a gas turbine as recited in claims 7 or 9 wherein the separated inert gas has less than about 35 volume percent methane, based on the volumes of methane and inert gases and the hydrogen enhanced inert gas/methane gas/hydrogen gas blend has from about 6 to about 10 volume percent hydrogen gas.

11. (Currently Amended) The method for fueling a gas turbine as recited in claims 7 or 9 wherein the separated inert gas blend has less than about 20 volume percent methane, based on the volumes of methane and inert gases and the hydrogen enhanced inert gas/methane gas/hydrogen gas blend has from about 6 to about 10 volume percent hydrogen gas.

12 - 20 (Cancelled)

21. (Withdrawn) A method of fueling a gas turbine with methane gas from natural gas reserves having from about 40 to about 80 volume percent methane, the method comprising;
providing a first natural gas stream from the natural gas reserve;
separating inert gases from methane gas in the first natural gas stream to provide a separated methane gas and a separated inert gas;

Appl. No. 10/728,626

Response dated November 19, 2004

Reply to Office Action of September 24, 2004

blending the separated inert gas, water and a second natural gas stream having from about 40 to about 80 volume percent methane to provide a sour inert enhanced inert gas/methane gas/water blend wherein the amount of inert gas blended with the second natural gas stream will decrease the relative percentage of methane gas to below about 40 volume percent methane, based upon the volumes of inert and methane gases, the water in the sour inert enhanced inert gas/methane gas/water blend being in amount effective for permitting the conversion of a portion of the methane in the sour inert enhanced inert gas/methane gas/water blend to hydrogen gas to provide a hydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend and effective for providing a flame stable dehydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend;

catalytically converting a portion of the methane to hydrogen gas in the sour inert enhanced inert gas/methane gas/water blend to provide a hydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend, the conversion effective for providing the flame stable dehydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend;

dehydrating hydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend to provide the flame stable dehydrated inert enhanced inert gas/methane gas/hydrogen gas blend; and

fueling a gas turbine with the flame stable dehydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend.

22. (Withdrawn) The method for fueling a gas turbine as recited in claim 21 wherein the hydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend is dehydrated in an amount effective for providing the dehydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend with at least about 110 BTUs per standard cubic foot of gas.

23. (Withdrawn) The method for fueling a gas turbine as recited in claim 21 wherein the dehydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend comprises at least 6 volume percent hydrogen gas.

Appl. No. 10/728,626

Response dated November 19, 2004

Reply to Office Action of September 24, 2004

24. (Withdrawn) The method for fueling a gas turbine as recited in claim 21 wherein the methane in the sour inert enhanced inert gas/methane gas/water blend is catalytically converted using a chrome/molybdenum catalyst.

25. (Withdrawn) The method as recited in claims 21 or 22 wherein the sour inert enhanced inert gas/methane gas/water blend does not have more than about 35 volume percent methane gas, based upon the volumes of methane and inert gases, and the flame stable dehydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend comprises from about 6 to about 10 volume percent hydrogen gas.

26. (Withdrawn) The method as recited in claims 21 or 22 wherein the sour inert enhanced inert gas/methane gas/water blend does not have more than about 20 volume percent methane gas, based upon the volumes of methane and inert gases, and the flame stable dehydrated hydrogen enhanced inert gas/methane gas/hydrogen gas blend comprises from about 6 to about 10 volume percent hydrogen gas.

27 - 38 (Cancelled)